COMMENTARY

More Surveillance in Child Care, Please!

Public health surveillance is an essential component of prevention. We need surveillance to identify preventable problems, to know where the conditions are occurring, in whom, what incidence, and how well or poorly we are doing toward their prevention. Surveillance has been defined as the "ongoing, systematic collection, analysis, and interpretation of outcome-specific data, closely integrated with the timely dissemination of these data to those responsible for preventing and controlling disease or injury" (*1*), but it is better understood as the "neurologic system of public health," a concept attributed to D. A. Henderson who led the global eradication of smallpox.

We usually think of surveillance as the aggregation of health data at a State or Federal level. Stroup and Thacker, in discussing surveillance for health problems affecting workers and children in child-care settings (*1*), understand that there is a role for case-based as well as rate-based surveillance. Rate-based surveillance is most valuable for establishing the magnitude of a problem, assessing its geographic distribution, and tracking its trends. In the United States, Alexander Langmuir was probably the foremost disciple of rate-based surveillance for communicable diseases (*2*). In contrast David Rutstein was the proponent of focusing on Sentinel Health Events (SHE), cases of selected diseases and injuries that signal a failure of prevention (*3*). The goal of the SHE approach is to identify the causes of these failures of prevention, so that they can be remedied, often by local action. It is interesting to speculate that if the SHE approach were adopted by child-care providers they themselves may become the most effective advocate for prevention. Imagine the impact possible if a child-care provider asked the appropriate questions about why a child failed to be vaccinated or was injured, and this act led to augmented prevention.

Some of the goals of surveillance include estimating the magnitude of the disease or injury, tracking its trends for better or worse, and identifying cases and epidemics of old and new diseases. Stroup and Thacker acknowledge that the goals of surveillance are different at the level of the child-care center and the local, State, and Federal governments. There must be mutual interest at all these levels for surveillance to work, since the goals of surveillance at the national level, such as estimating the magnitude of child-care related injury, may be of little practical value to the child-care proprietor. Conversely, the public health establishment at the State, but particularly at the Federal level, may have no practical necessity for identifying specific diseased or injured children. Since most surveillance efforts are poorly funded, it is most important that there be a mutual interest among all participants in child care, or any other kind surveillance, in order to sustain the program.

Prevention depends upon a cascade of events; occurrence of disease or injury represents a failure of that preventive cascade. It is the old story of "for want of a nail the shoe was lost, the horse was lost, etc." Without exception the occurrence of any disease or injury is preceded by a series of precipitating events. For example, a burn victim in a child-care center may be the end result of inadequate emergency egress, inadequate smoke alarms, inadequate wiring, and so forth. Surveillance would do well by broadening its focus from collecting "outcome-specific data" to collecting information on "risk factors" whether they be behavioral, such as failure to seek immunization, or physical hazards, such as inadequate wiring.

Given the multiple goals of surveillance, the array of candidate diseases and injuries and hazards to be surveilled, the variety of interests from client and proprietor to local, State, and Federal health officials, the challenge of developing workable case definitions and systems of reporting, and other practical problems, it is particularly wise for Stroup and Thacker to call for pilot studies and experimentation before launching into a broader program. Depending whether these experimental surveillance programs meet their goals and measurably contribute to prevention, then decisions can be made whether child-care surveillance is an effective investment in prevention.

My colleagues in the field of disease and injury surveillance certainly share the following humbling insight. The victim knows a great deal about the events and circumstances that caused the illness or injury and how it could have been prevented. One role of surveillance is to provide an information route from the locale of the tragedy to the realm of the

public so that appropriate efforts can be taken by others to avoid consequences that otherwise may never be thought about seriously and certainly never acted upon. To motivate toward prevention, dissemination of information must be done effectively, but also accurately so that risks are not misperceived and inappropriate choices toward the wrong investments in prevention are not made. We owe a debt to Stroup and Thacker for making us focus upon the possibilities of prevention in child care.

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References

1. Stroup, D., and Thacker, S.: Public health surveillance in child-care settings. Public Health Rep 110: 119–124, March-April 1995.
2. Langmuir, A. D.: The surveillance of communicable diseases of national importance. New Engl J Med 268: 182–192 (1963).
3. Seligman, P., and Frazier, T.: Surveillance: the sentinel health event approach. *In* Public health surveillance, edited by W. Halperin and E. Baker. Van Nostrand Reinhold, New York, 1992, pp. 16–25.

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